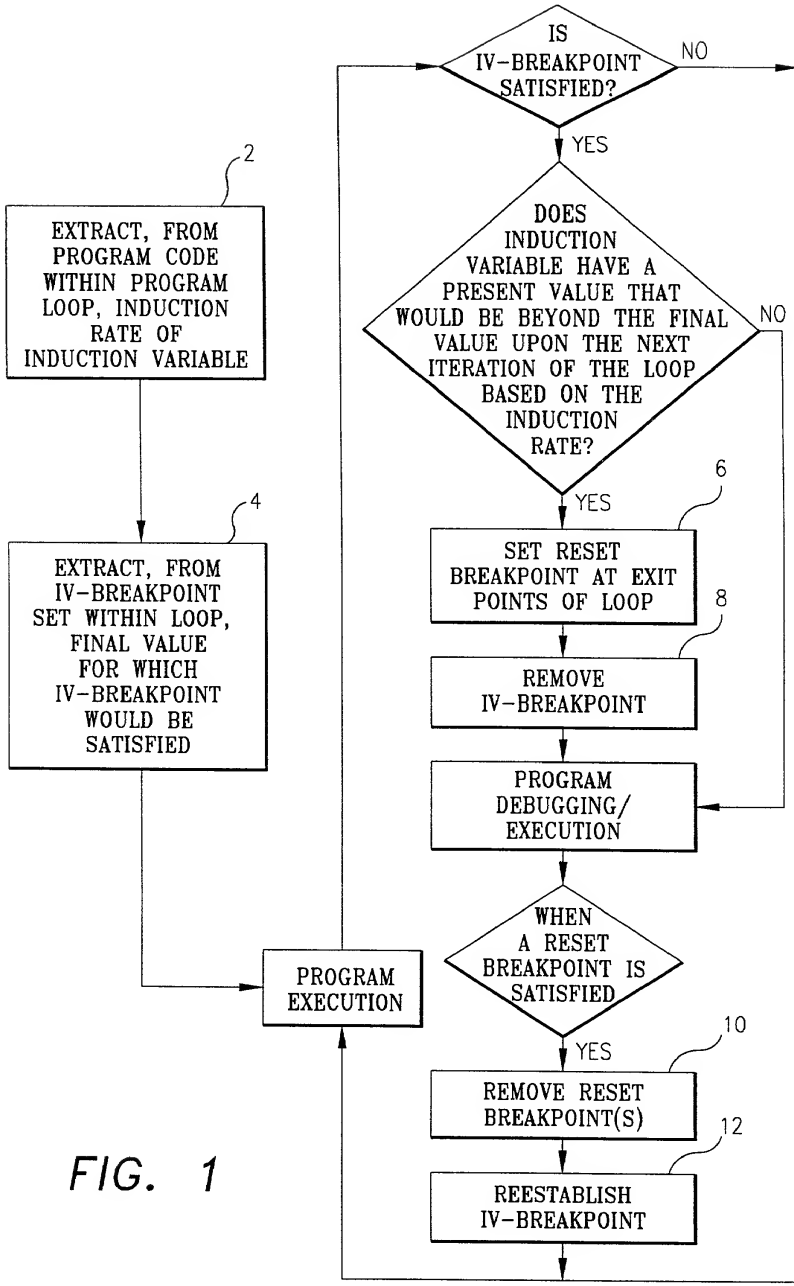
2
EXTRACT, FROM PROGRAM CODE WITHIN PROGRAM LOOP, INDUCTION RATE OF INDUCTION VARIABLE
4
EXTRACT, FROM IV-BREAKPOINT SET WITHIN LOOP, FINAL VALUE FOR WHICH IV-BREAKPOINT WOULD BE SATISFIED
PROGRAM EXECUTION
IS IV-BREAKPOINT SATISFIED?
NO
YES
DOES INDUCTION VARIABLE HAVE A PRESENT VALUE THAT WOULD BE BEYOND THE FINAL VALUE UPON THE NEXT ITERATION OF THE LOOP BASED ON THE INDUCTION RATE?
NO
YES
6
SET RESET BREAKPOINT AT EXIT POINTS OF LOOP
8
REMOVE IV-BREAKPOINT
PROGRAM DEBUGGING/ EXECUTION
WHEN A RESET BREAKPOINT IS SATISFIED
YES
10
REMOVE RESET BREAKPOINT(S)
12
REESTABLISH IV-BREAKPOINT

FIG. 1

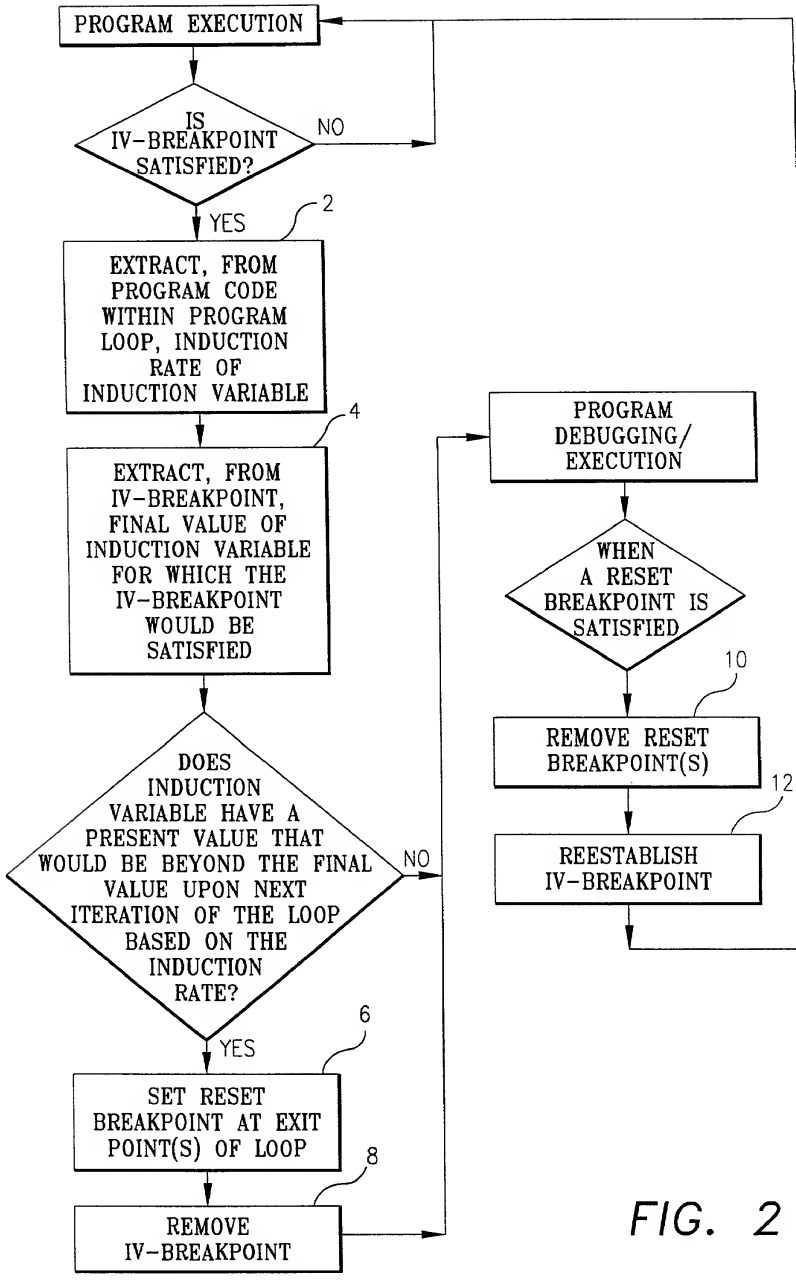
PROGRAM EXECUTION
IS IV-BREAKPOINT SATISFIED?
NO
YES
2
EXTRACT, FROM PROGRAM CODE WITHIN PROGRAM LOOP, INDUCTION RATE OF INDUCTION VARIABLE
4
EXTRACT, FROM IV-BREAKPOINT, FINAL VALUE OF INDUCTION VARIABLE FOR WHICH THE IV-BREAKPOINT WOULD BE SATISFIED
DOES INDUCTION VARIABLE HAVE A PRESENT VALUE THAT WOULD BE BEYOND THE FINAL VALUE UPON NEXT ITERATION OF THE LOOP BASED ON THE INDUCTION RATE?
NO
YES
6
SET RESET BREAKPOINT AT EXIT POINT(S) OF LOOP
8
REMOVE IV-BREAKPOINT
PROGRAM DEBUGGING/ EXECUTION
WHEN A RESET BREAKPOINT IS SATISFIED
10
REMOVE RESET BREAKPOINT(S)
12
REESTABLISH IV-BREAKPOINT

FIG. 2

```
Line 1      foo_1(K)
     2      {
     3              Y=2;
     4              for (J=0;J<10000;J++)
     5              {
     6                      A[J]=K+J;
     7              }
     8              return(K+Y);
     9      }
```

```
20 ~ IV-Breakpoint          =BREAK 6 WHEN J<500
22 ~ Induction Variable     =J
24 ~ Induction Rate         =J=J+1;
26 ~ Final Value            =499
28 ~ Reset Breakpoint       =BREAK 8 RESET
```

FIG. 3

```
Line 1      foo_1(FLAG, K)
     2      {
     3              J=0;
     4              while (J<10000)
     5              {
     6                      A[J]=K+J;
     7                      if(FLAG==TRUE)
     8                              J++;
     9                      else
    10                              J+=2;
    11                      if(checkforERROR()==TRUE)
    12                              return (K);
    13              }
    14              return(K);
    15      }
```

```
20 ~ IV-Breakpoint          =BREAK 6 WHEN J<500 OR J==600
22 ~ Induction Variable     =J
24 ~ Induction Rate         =J=J+1,J=J+2
26 ~ Final Value            =600
28 ~ Reset Breakpoint       =BREAK 12 RESET
   ~ Reset Breakpoint       =BREAK 14 RESET
```

FIG. 4